

610.
598
44
JAN 29 1922
CANADIAN MEDICAL AND PUBLIC HEALTH CONGRESS
VANCOUVER, B.C., WEEK OF JUNE 21st, 1920

Vol. XI

TORONTO, MAY, 1920.

No. 5

The Public Health Journal

Recent Advances in the Science of Ventilation from the Industrial Standpoint by Geo. G. Nasmith, C.M.G., Ph.D., D.Sc., D.P.H.....	197
Sanitation by W. H. Hattie, M.D.....	207
Public Health Information Bearing upon Pre-Natal Subjects by Robt. E. Wodehouse, O.B.E.....	211
Industrial Hygiene: Need of Research in Canada....	216
A Plan for a More Effective Federal and State Health Administration by Frederick L. Hoffmann, LL.D., (cont.).....	221
Social Background Standards of Child Placing by Mrs. A. D. Fisher	226
The Provincial Board of Health of Ontario.....	231
News Items.....	233
Editorials Canadian Recognition of the Scientific Basis of Industrial Hygiene.....	235
Joint Congress.....	237
Preliminary Programme, Ontario Health Officers' Association.....	244

\$1.00 per annum

20 cents per copy.

169 BAY ST., TORONTO

Mutual Benefits Day by Day

What the Mutual Life of Canada Is Actually Doing

THE Mutual Life is paying in cash to its policyholders or their representatives \$12,700 every working day.

The Mutual Life is increasing the policyholders' funds at the rate of over \$10,000—per working day.

The Mutual Life assumes new risks at the rate of \$135,418 every working day.

The Mutual Life receives, for all purposes, \$28,611 every working day.

The net profits of the Mutual of Canada, credited entirely to policyholders, amount to \$4,341 for every working day.

The Mutual Life of Canada has \$170,706,000 of life insurance in force on the lives of 70,000 members, an average of \$2,400 each.

BE A MUTUALIST!

THE MUTUAL LIFE OF CANADA

WATERLOO - ONTARIO

A Free Course in "Salesmanship"

We have thought about the young man who sees no prospects ahead. Would you like to be in a business that will give you

A Good Living Wage
A Profitable Future
A Provision For Old Age

We teach a man the Insurance Business, which offers permanent success, does not fluctuate, is a professional occupation, and has been truly named "The best paid hard work in the world."

This is done by a correspondence course and personal assistance, free of charge.

When he is fully prepared for the work, we place him in a position and help him to make good.

The first two lessons of the Company's correspondence course will be sent to anyone interested.

It will pay young men who desire to get on in the world to look into this.

All correspondence strictly confidential.

CANADA LIFE ASSURANCE CO.
Head Office: TORONTO.





The Public Health Journal

VOL. XI

MAY, 1920

No. 5

Recent Advances in the Science of Ventilation from the Industrial Standpoint

BY GEO. G. NASMITH, C.M.G., PH.D., D.Sc., D.P.H.*

THE great national stocktaking which has followed in the wake of the war has emphasized certain facts very strongly. One of the most outstanding is that whereas a few years ago capital was probably the most sacred thing in the world this is no longer so; but, on the contrary, all that directly affects human life and happiness is now, in Anglo-Saxon countries at least, the thing of supreme moment. Most employers of labor as a result of the war and its experiences, whether they wished to or not, have been forced to adopt a new set of working principles in regard to the health and welfare of the workers. As a natural consequence of this new point of view, held formerly only by certain people interested in questions of public health and public welfare we are now hearing and reading much about reconstruction, of labor and capital, of the minimum wage, of shorter working hours, of profit-sharing, and many other things which have to do with the problem of keeping the worker satisfied and giving him a fair share of the comforts to which he is entitled.

With the belief current among business men at the moment that production must be increased to the limit of our capacity there is associated the principle that the worker himself must not be further exploited. With this end in view efficiently experts have been employed not only, or even chiefly, for the purpose of increasing production, but to endeavor to save the worker all unnecessary and useless labor. It is, of course, true, that in most cases where the strength and energy of the worker is improved the quality and quantity of his output will also increase.

Of Gore, Nasmith & Storrie, Consulting Engineers, Toronto.

Coincident with the changes which are steadily taking place in regard to labor and capital great improvements have come in the conditions of environment under which labor is carried on. Through the efforts of public health officials and sanitarians during the past twenty years, there has been a remarkable advance in factory hygiene and other matters of environment which tend to improve the health and efficiency of the workers. Numberless employers have come to recognize the fact that it pays to engage doctors and nurses to look after their employees, and that it is good business to protect the workers from accident, dust, gases and other agencies which lower their physical efficiency.

In Toronto before the war there were 5 firms which employed welfare nurses to look after their employees. In the year after the war there were in the same city 28 firms employing qualified nurses. At the University of Toronto at the present time there are a number of graduate nurses taking the post-graduate course in social service work with the object of fitting themselves for the field of industrial nursing. The Department of Public Health in the City of Toronto employs about one hundred nurses in welfare work, and these doubtless relieve the smaller industries of much of their responsibility. All of which is evidence that even where the municipality takes the responsibility of looking after the general welfare of the community there is plenty of room for the extension of welfare work in private industry, and, also, is an indication that from the business standpoint such welfare work is worth while.

Even where labor is unskilled it has proved a good investment to improve the working conditions, for then workers, as a result of improved surroundings, will remain longer on the job, and there is a greatly lessened turnover of labor, which, in one striking instance in Ontario amounted to 60 per cent. in three months.

THE EFFECT OF ENVIRONMENT ON HEALTH.

The human body is an extremely complicated machine whose efficiency depends upon the mutual co-operation of many factors. When all of the body functions are operating in harmony we have the conditions which may be summed up in the term health. The health of the body is shown among other things by its ability to perform work, and to resist disease. The effect of outdoor life, of regular exercise, of regulated hours, of carefully controlled environment and medical supervision was wonderfully well shown in the civilian armies during the war. In the army, men, formerly of sedentary occupations, rapidly became strong in body, perceptibly

broadened out and developed a most marked resistance to disease. Statistics show that there was actually less disease in the British Army in the field than there was among the civilian population at home, in spite of the fact that the soldiers were continually subjected to all sorts of hardships and exposure. One could actually see the improvement taking place in the amateur soldier of a new battalion in the course of a few weeks; his brightened eye, his heightened color and his springy walk, all indicated that his muscular, nervous and vascular system were in fine tonic condition. There is no doubt that fresh air is nature's tonic and common experience proves that fresh air gives us a general feeling of well being.

In civilian life the conditions of environment of the average individual are quite different to those of the soldier. He is protected from sudden changes of temperature and undue exposure; his supply of fresh moving air is limited, his exercise is curtailed, and he loses tone; as a consequence he is unable to react to sudden changes of temperature, his powers of resistance are reduced, and he becomes more subject to attacks of disease. During the war it was clearly shown that in industries where the highest efficiency was desired men and women could not be forced to work overtime without the price being paid in a reduced output of work and in an increased amount of sickness. It was also discovered that a weekly holiday was essential, and that a shorter working day frequently resulted in an increase in the amount of work turned out.

ENVIRONMENT IN INDUSTRY.

The purpose of industrial physiology is to determine the conditions under which the worker can perform his work most efficiently while maintaining his health, and, furthermore, of establishing in the factory and workshop the conditions which tend to produce the maximum output of work without impairing the maximum power of the worker. Much has been learned about the first of these problems, and, when workers and employers realize that it will be to the advantage of both to organize industrial work on an intelligent basis the second will come about. Research committees in Great Britain and the United States have been carefully studying the relations of the hours of labor and other conditions of employment to the development of fatigue, giving due consideration both to industrial efficiency and to the preservation of the health of the workers.

In 1914 the Department of Health of Toronto entered upon a campaign to improve the sanitary and hygienic conditions in factories. It was then found that in many industries there was little or no protection against poisonous fumes and dusts, but in a very short time hoods, ducts and exhaust fans for the purpose of carrying off these materials and protecting the operators were established in practically every place where such were needed, while existing sanitary conveniences were greatly improved. It was noteworthy that there was little opposition to the demands of the Health Department at the time, but the willingness to co-operate has latterly become even more pronounced. The war has brought about a much more sympathetic attitude on the part of the employer to demands for improving the working conditions of the employees.

In the industrial plants of Toronto, which are much like those in any other large city, there are few modern ventilating systems. In general the system of heating is steam radiation, and the air supply comes through the windows. In large factories window ventilation is very difficult, and not at all satisfactory from the sanitary standpoint; even in smaller plants, though fair results may sometimes be obtained with intelligent management, the method is almost sure to entail drafts with a certain amount of risk to a number of the employees. An ideal system of washed, humidified and tempered air forced into and drawn from the workrooms by fans is not, to the writer's knowledge, to be found in a Toronto factory, though partial systems are to be found in some schools and office buildings.

THE NEWER KNOWLEDGE OF VENTILATION.

It is generally recognized among sanitarians and hygienists that a small improvement in sanitary or hygienic conditions, which will improve the health and efficiency of all the members of the community by, say, five per cent., is of infinitely greater value than one which will improve only a small percentage of the community by say 25%. In a city, for example, an improvement which makes the water and milk supply safe favorably affects every single member of that municipality and counts more in promoting the general health and efficiency of the whole community than the individual work of hundreds of doctors and nurses in directly curing cases of disease once they have been contracted. In the field of public health an ounce of prevention is worth many pounds of cure.

For this reason any improvement in a system of ventilation will have far-reaching results. Everybody lives, moves and has his being in an atmosphere which he constantly inhales and exhales; which literally surrounds him like a garment; which is the medium that carries germs of disease to him, and which, through its temperature and moisture constantly affects his skin and through the skin all the vital processes of his body.

It is of great theoretical interest to know that some of the most remarkable developments in Hygiene during the past few years have been in the problem of ventilation, and it is of great practical importance to realize that this new knowledge of ventilation can be applied to the great benefit of the community at large.

In 1905 Paul showed very clearly that all the ill-effects of bad air were not due to chemical, but to physical characteristics. He had subjects live in an air-tight cabinet and allowed them to rebreathe the air until they began to show depression, headache, dizziness or even a tendency to nausea. When allowed to breathe fresh outside air through a tube no relief whatever was experienced; neither did the bad air from the inside of the cabinet produce any symptoms in a person outside of the cabinet breathing the air through a tube.

When the air in the cabinet was dried, or cooled, or put in motion by means of a fan all of the symptoms of discomfort and illness immediately disappeared without any chemical alteration being made in the air. The result of stirring up the air in the cabinet, cooling it, or removing the excess moisture by drying simply enabled the human body to throw off its heat more rapidly. In other words, the symptoms arising in vitiated atmospheres are due to heat stagnation in the body, and the moisture of the atmosphere, its temperature and its stillness are responsible for the effects produced.

These findings of Paul have since been shown over and over again by numerous scientists to be correct. In recent years the New York Commission on Ventilation, which experimented upon hundreds of human subjects over a period of years, has further confirmed these findings and thrown a great deal of additional light on the subject. The Commission proved conclusively that the bad effects of poor ventilation are due almost solely to excessive humidity, to increased temperature and to stagnation of the vitiated air.

The New York Commission kept men in air-tight rooms day after day rebreathing air that contained all the accumulated products of the breath. Yet they did as much mental and physical

work, and felt just as happy as when fresh air was constantly supplied to them, as long as the temperature of the air was kept low. Very careful tests were made by skilled scientists to determine whether there were any ill-effects upon the heart, circulation or general efficiency of the body, but none could be detected. The Commission found that the whole secret lay in the fact that the air around the body was stagnant, and that as long as this air was continually removed or its temperature lowered, there were no harmful effects, even though its carbon dioxide content was increased to many times its normal amount, and its oxygen content greatly reduced.

It was found that slight rises in the body temperature may be produced by a higher temperature of the surrounding atmosphere, and that these rises produce marked physiological effects, such as an increase in the heart beat. A considerable rise in the atmospheric temperature may also quicken the respiration. Passing from a hot to a cold room results in an increased secretion of the nasal mucous membrane, and this condition seems to be favorable to invasion of that protective layer by micro-organisms and consequently to infection.

The actual inability to do as much physical work on a very hot day has been proved by confining animals in very hot cages for several hours, and then showing by accurate scientific tests that their muscles were incapable of doing as much work as they had been before being subjected to the heat. It is therefore natural that on a hot, humid day we should reduce our muscular exertions to the minimum in order that we may not have so much heat to get rid of. The power to perform physical or mental work at moderately higher temperatures is not at all impaired, but the inclination to do physical or mental work is diminished—a most important point in industry.

Without going into the actual details of experiments and the results obtained by numerous investigators in the problems of ventilation, it has been found that in general a moderately cool and moderately dry air in motion is the most beneficial to the human body. A temperature of from 65 to 68 degrees Fahrenheit, with a relative humidity of not more than 50% is about the best where great physical labor does not occur. Furthermore, the stimulating effect of fresh air on the human body depends not on its chemical composition, but on its physical characters, namely, low temperature, low humidity and motion.

THE VALUE OF IMPROVED SYSTEMS OF VENTILATION IN INDUSTRY.

In workshops it has been found that a change of temperature of a few degrees is stimulating to the worker, and tends to increase the output; whereas a constant temperature is depressing to the individual.

From the standpoint of the employer and employee these facts are of the greatest value. Proper changes in the systems of ventilation in many industries based upon the newer knowledge will bring about beneficial results in the health and efficiency of the workers, and in their output of work. The ideal system of ventilation should accomplish several things. It should first of all maintain the air at a proper temperature and humidity; it should keep the air in gentle motion; it should remove odours, bacteria, dust and other contaminating substances, such as gases, and should provide a sufficient quantity of fresh air to remove all products of respiration.

There can be no sound hygienic objection to the warmed air of a building being recirculated provided always that it is partly diluted with outside air and washed free from bacteria, dust and odours by passing through water screens. This washing acts exactly as a rain shower in nature, thoroughly cleansing the air of all impurities.

Such air may be cooled, warmed and humidified at the same time to the exact degree desired. As an example of the saving effected it is said that in the gymnasium of the International Y. M. C. A. at Springfield, where this process is in operation, a saving of over 40% of coal from recirculating the air is effected.

The intelligent use of windows in flushing out the building during the rest periods, which are becoming common in modern factories, have a beneficial and stimulating effect on the employees and many other modifications will probably develop as the skilled ventilating engineer, watching results, develops his plan of operating the system. Any scheme of ventilation, whether artificial or natural, will fail if it is not operated intelligently, and the intelligence in this case presupposes a knowledge of the ends to be attained, and the reasons therefore. When it is realized that in one experiment as much as 15% less work was done at 75 degrees Fahr. than at 68 degrees Fahr., the value of careful and intelligent control of ventilation may well be appreciated. Overheated rooms are not only uncomfortable, but produce well marked effects upon the heat regulating and circulating systems of the body, and materially reduce the inclination of occupants to do physical work.

There can be no question as to the value of these modern developments in ventilation in improving the health and stimulating the energy of the worker. With a general improvement in the physical well-being of the individual there is little doubt that his daily output of work will be increased. In overheated, stuffy rooms the worker will unconsciously do less work; from the physiological standpoint it is perfectly natural that he should.

Some of the workshops and factories in this country are a disgrace to the owners and to the community. Public health officials and factory inspectors have done a great deal to gradually force unwilling employers to instal the minimum sanitary requirements demanded in the interests of public health and safety. But beyond these minimum requirements many employers have no intention of going; they will not realize that a dollar invested in improved hygienic conditions for their employees will be almost sure to yield a return many times as great, both in the quality and quantity of the work turned out, in reduced sickness and in lessened liability to accident.

From what has been said above it must not be inferred that fresh air is of no use, that the practise of underheating or suddenly chilling hot workrooms is to be recommended, or that recirculating unwashed air is a thing to be desired; this discussion has no such object, and the writer would be the first to condemn such practises. From the standpoint of the individual and the public health everyone should get as much fresh air as possible.

Our viewpoint of what constitutes fresh air, however, has changed materially, and our practise will naturally change also. The important thing to appreciate is, first, that fresh air is valuable because it is cool or is in motion; and, second, that fresh air is not valuable because it has a slightly larger amount of oxygen or a slightly lessened amount of carbon dioxide than indoor air. These are physiological facts which have been proved beyond all question of doubt. On the other hand, one must appreciate the psychological effect of so-called bad air on people coming into it from fresh air.

The humidity is an extremely important factor. It is a matter of common experience that we feel disinclined to work on moist, hot sticky days when the humidity of the air is high. There is a definite physiological reason for this. The temperature of our bodies is controlled through the amount of heat lost through the skin by the regulated evaporation of visible or invisible perspiration. At a high temperature as the humidity of the air surrounding the body increases the moisture constantly given off from the surface

of the skin is less easily evaporated, and, therefore, less heat is lost from the body. If the temperature of the air is high when the humidity is high we experience great discomfort because our bodies are unable to get rid of their superfluous heat by these methods. On the other hand, the air may be saturated with moisture, as it often is over the sea or in insular climates, and yet be very invigorating because it is cool and carries away through conduction any surplus heat that the body needs to be rid of.

On humid days the humidity in places where large numbers of workers are congregated increases, and the normal conditions of discomfort, due to excessive humidity, become aggravated. On the other hand, a temperature over the desert may be even as high as 115 to 120 degrees Fahrenheit and yet be quite bearable because the relative humidity is so low that the dry air rapidly carries away the moisture from the surface of the skin, and thereby reduces the temperature of the body. Very dry air, such as we get in practically all of our buildings during a Canadian winter, is also very objectionable, drying up the mucous membrane of the eyes, nose and throat and creating a most uncomfortable feeling, which is very obnoxious to people accustomed to a moister climate.

High temperature, combined with high humidity, produces not only discomfort, but definite symptoms of physiological derangement, such as a rise in body temperature and pulse rate, and a fall in blood pressure, doubtless due to manifestations of the body's effort to reach a state of heat equilibrium with the outside environment.

With an understanding of the principles here outlined it may be seen that it will be quite possible and feasible from the economic standpoint to materially modify our systems of ventilation with great benefit to the health and energy of the worker and the output of the plant. From the commercial standpoint it would probably pay well to instal in almost every new factory the most modern ventilating system and employ an up-to-date engineer at the single task of watching the ventilation with the efficiency of the worker in mind; the output of the factory would take care of itself. Such an engineer as the writer foresees him will carefully control the temperature, the humidity and the movement of the air.

SUMMARY.

Accurate and elaborate physiological studies on hundreds of human beings have shown that air temperature and air humidity have profound effects on the human organisms. When air condi-

tions are unfavorable the health and efficiency of the subject is likely to be seriously impaired. But since we now possess accurate knowledge of how temperature and humidity affects the human body, and particularly since there are practical mechanical methods of controlling and modifying these factors at will, there is no reason why we cannot live indoors under atmospheric conditions which at least approximate the ideal.

Taking these facts into consideration, it would appear to be an excellent investment to provide only air that has been so tempered and conditioned that will improve the health and increase the efficiency of the employee, whether in office, warehouse or factory.

Sanitation*

W. H. HATTIE, M.D.,

Chief Officer of Health for the Province of Nova Scotia.

THE three things which we especially regard in man—his physical, mental and moral attributes—are mysteriously but indubitably associated and co-related. Sociological studies made in many countries show that a very large percentage of those who offend against the laws are below the normal average either physically and mentally, or both physically and mentally. Moreover, mental health is largely dependent on health of body. The struggle for existence can best be endured by those who are fittest, while those of limited endowment may be practically compelled to resort to questionable means of acquiring the necessities of life. It is, therefore, not without reason that in such conferences as this a place is given to the consideration of conditions which affect health, for it may be logically claimed that the prime essential to social betterment is the establishment of conditions which favor the development of an alert, vigorous, resourceful people—capable of competing successfully and yet honourably against all comers.

I have been asked to deal with the subject of "Sanitation," and in order to be sure of my ground I have gone to the dictionary for a definition of the topic which has been assigned to me. There I learn that Sanitation is "the practical application of knowledge and science to the preservation of health." Upon such a text a very long dissertation might be given. So much of our knowledge is dependent upon science that it is not easy to dissociate knowledge and science in our consideration of the definition. Nevertheless, much of our most practical work, perhaps in all line of endeavour, was first undertaken on the basis of purely empiric knowledge. As a single example of this in the field of sanitation it may be said that the filtration of water was practiced for more than half a century before we had a scientific explanation of its usefulness. And it has been known for ages that health depends essentially on the things taken into the body and the things cast off from the body. When to these we add clothing and shelter we have really compassed all the factors which most

*Read before the Social Welfare Congress, Halifax, March 11, 1920.

intimately concern health, and both clothing and shelter have to be considered in relation to body intake and body output. Air, light, water and food we must have in sufficient quantity and of proper quality. Shelter plays an important part in determining both the quantity and quality of the air and light we receive, as well as the quality of our water and food. Clothing and shelter both influence and are influenced by the materials which the body casts off. These factors, and their interdependence, were known if not fully appreciated, long before science afforded any explanation of the part they play in the maintenance of health. But science has added incalculably to the precision of our knowledge, is daily enabling us to interpret previously inscrutable phenomena, and holds out to us the brightest hope of ultimate solution of problems of momentous import to our physical and therefore to our mental and moral welfare.

It has been the application of the revelations of science which has made possible the wonderful progress which has been effected of late years in the public health field. The discovery of the specific germs of many of the communicable diseases, and the knowledge which has come to us of the habits and limitations of these germs, have not only indicated to us rational methods of preventing the spread of such diseases, but have stimulated interest in the control of other diseases which, though not communicable, are nevertheless preventable. And so modern sanitation is concerned with a great deal more than the endeavour to check the spread of infection, and embraces every activity which promises to make man healthier and more vigorous, and to enable him to both put the most into and get the most out of life.

Preventable sickness and preventable death extort from us a frightful toll in suffering, sorrow, inefficiency and want, and accounts for no small share of the degeneracy, dependency, vice and crime which are so greatly to the discredit of our social structure. They also involve us in an economic loss which can only be estimated roughly, but which is undoubtedly enormous—certainly running well into millions of dollars annually for our province alone.

Wherever public health work has been undertaken seriously, methodically and energetically, there has been a prompt and sustained reduction in the death rate, and consequently in the sickness rate. Up until the present we have been playing with the health of our people in Nova Scotia. Now we are making a beginning at better things. A policy has been adopted which should have the effect of lowering a death rate which has been consistently far too

high, but its success depends upon the co-operation of all our governing bodies—provincial, municipal, city and town. It is most regrettable that several of the councils have not shown a disposition to co-operate. Apparently they have failed to realize the importance of conserving our most precious asset—the lives of our people. The reason is all too apparent. There is not sufficient demand for proper prosecution of public health activities. Governing bodies are composed of human beings, and it is very human to give first consideration to the demands which are most vigorously pressed. Obviously, if we are to have better health our people must be educated in the need for it, so that they will be ready not only to give support to every measure which aims at public health betterment, but to make it evident that our various governing bodies are expected to institute such measures.

It seems to me that it is a legitimate function of such an organization as a Social Service Council to take a full share in such educational work. There has been a good deal of discussion of late as to how public health work should be divided between the state and private enterprise. Educational work of this type might well be undertaken by private enterprise, and perhaps our definition of sanitation may suggest partition in other particulars. "Sanitation is the practical application of knowledge and science to the preservation of health." Would it not seem that to the State should be assigned the practical application of the knowledge we already have, while to private enterprise there should be assigned at least the greater share in the scientific investigation which must be carried on in order that we may be guided aright in work already being undertaken and shown the way for other activities? There is nothing novel in the suggestion. It is merely set forward for consideration at a time when constructive co-operation is an imperative necessity, and when any dissipation of energy through needless overlapping of activities would be little short of criminal waste.

Of the need for more effective sanitary work, our statistics cry loudly. They show that our people need in varying degree either more *and* better or more *or* better air, light, water and food. They show that greater care must be given to the things cast off from the body—the excreta which may pollute air, water, food and clothing, and the germs of communicable disease. They show that we continue to sacrifice many lives yearly through our ignorance, indifference and greed, and that of those who escape death a distressingly large proportion are so handicapped that they cannot make

the fullest use of and attain the fullest enjoyment of life. And when we compare our statistics with those of many other countries we find that we are being placed under a mighty handicap, for these countries are reducing their death rates, reducing their sickness rates, and thereby increasing the physical and mental vigour and incidentally the moral stamina of their people. Is this not a matter which should cause us concern? Should we be indifferent to the fact that our general death rate remains high while that of countries with which we must compete is being steadily lowered? Is it of no importance to us that despite a fairly satisfactory birth rate our infant mortality rate for the Province is considerably greater than that of the great cities, London and New York, and more than double that of New Zealand? Many of the factors accounting for these differences are within our control. Perhaps the most pressing problem in our towns is the housing problem, which cannot be solved promptly, but we can at least provide at once for cleanliness, light and ventilation in practically any house in the province. We can see that our babies get good milk; that our expectant mothers get necessary attention and assistance; that infectious conditions are kept under control; and that the remediable defects which are so common in our school children are corrected. We can make school buildings (and public buildings generally) sanitary. We can do much more than we have done for tuberculous patients, and limit the opportunities which this disease has for spreading. We can keep streets and yards clean, and eliminate much of the danger which associates with the distribution of dust and offensive effluvia. We can guard against the dangers which associate with unwholesome foods and beverages. In such ways we can do a great deal towards attaining the goal we seek—the elimination of unnecessary sickness and suffering, the prevention of unnecessary death, and the upbuilding of the physical strength of our people. Thus will we go far not only towards assuring our people the comfortable enjoyment of life and preparing them for success in the competition with other peoples—every day growing keener, but also towards giving them that degree of physical strength which unquestionably is of great importance in determining mental acumen and moral sturdiness.

"Public Health Information Bearing Upon Pre-Natal Subjects"

BY ROBT. E. WODEHOUSE, O.B.E.

Ontario Provincial District Medical Officer of Health; Lieutenant-Colonel C. A. M. C., District No. 2, Toronto.

DURING the month of February, 1920, a tour was made through the Provincial Health District No. 7, with the Ontario Board of Health exhibit, and studies were made of the Vital Statistics, as well as survey made of the municipalities, house to house visits being made to mothers of babies in arms, and clinics were conducted for parents to consult regarding their children. Much interesting data was secured, and is presented here. The tour completed, the writer decided to obtain further information along certain lines, from other communities not visited. The tour included Blind River, Thessalon, Sault Ste. Marie, Kenora, Keewatin and Fort Francis. Further figures were obtained from Fort William, Galt and Guelph. The records of the house-to-house visits and clinics contributed the following information: 158 mothers gave facts covering 734 pregnancies, including 4 miscarriages; 572 babies were breast fed; 72 babies artificially fed, and 30 babies had breast milk and an auxiliary food.

The number of deaths from intestinal causes, under one year of age, was 23. There were 3 still births and one death under 4 hours. The mothers resided in Blind River, Thessalon, Sault Ste. Marie, Kenora and Keewatin. There has not been any attempt at child welfare work in these communities, either by the Local Board of Health or by volunteer organizations. Their infantile death rate, with the exception of the Soo, are surprisingly good, as will be seen by reference to the tables following:

The clinics were very poorly attended, but those who visited them came from homes having the maximum of comfort and enlightenment as well as social status in the community, and along with these mothers came those of every degree of prosperity in the municipalities. All were keenly interested and grateful. The medical men expressed the opinion that there would be less embarrassment to the mothers visiting the clinic, and much less to the different local physicians taking their turn at the clinic if a total stranger were to preside. In the smaller communities, all the doctors know all the people. It is easier for a stranger to advise with this physician and that one than for the local man. It was quite

evident that clinics concerned with child welfare work should not be considered as healing centers, and only as centers to advise and bring mothers in contact with their physicians for supervision and care in matters they were at the moment not aware warranted such. It was evident that clinics should be open to all classes regardless of their financial standing, and none should be debarred. All wish to be educated and should be granted the privilege.

The exhibit did not attract the numbers of adults that one would have hoped for. The writer is fully convinced that the parents of infants or expectant mothers are very grateful for house visitations by child welfare workers, and believes this the most remunerative channel for advancing the cause, as personal touch is essential and gets results at once, which propaganda and exhibits alone will not accomplish for an indefinite number of years. Each mother visited and instructed is ever afterwards an active missionary and advocate of child welfare undertakings. A community of from 2,000 to 5,000 population can be handled in six to eight days, if all organization of lists, etc., is completed beforehand. Twenty to thirty visits can be made a day if there is no loss of time finding addresses. The plan was to visit the mothers of every baby registered as born during the previous twelve months.

(The writer wishes to acknowledge with thanks the excellent results obtained in this work, due to the untiring efforts of child welfare Nurse Knox, of the Ontario Board of Health Bureau.)

The records of all the communities disclosed the following data, gleaned in each case by the writer, and therefore subject to uniformity of error:

THREE COMPARATIVE SCALES
TOWNS AND WARDS

	Fort Francis	Kenora	Guelph	Galt	Fort William Wards			Four	Sault Ste. Marie
					One	Two	Three		
<i>Still Birth—</i> <i>Rate per Preg-</i> <i>nancy Regis-</i> <i>tered</i>	1 in 92	77	28	18.3	17.8	21.9	43	17.6	23.6
<i>Deaths under</i> <i>Seven Days</i>	1 in 23	21.8	48.1	55.	66.75	51	43	28.2	33.3
<i>Combined S.B.</i> <i>& Seven Day</i> <i>Deaths</i>	1 in 18.4	17	17.73	13.75	14.05	15.3	21.5	10.84	13.8

Total pregnancies tabulated, 2,028.

The impressions received from the preparation of these tables are:

1. Population of British ancestry give birth rates in Ontario municipalities between 2,100 and 2,300 per 100,000 population. This increases in proportion to the extent to which non-British ancestry residents percolate into a settlement, reaching as high as 3,700 per 100,000 population, where non-British ancestry predominates.

2. The infant mortality is decidedly influenced by the above-mentioned factors, but it also shows ups and downs influenced by causes not detected. Ward 3, Fort William, containing the best off, financially, in the city, and a portion of the city best organized, in so far as city utilities are concerned, has been influenced markedly by the child welfare work of its Department of Public Health, showing a rate of 46.51 per 1,000 births. In the same city, the two wards having a predominance of population of non-British ancestry show rates of 134.75 and 168.53, the latter ward being most unhygienic in its location and actual conditions, and having a very large non-English-speaking mother population.

3. The centers where infant child welfare work has not been undertaken show remarkable states. Sault Ste. Marie shows one ward with a death rate of 61.5. This undoubtedly is influenced by the high non-resident birth rate attributed to the General Hospital, which is situated in this ward. Otherwise, the Soo shows rates in three wards in excess of 150 per 1,000 births, and in two of these the rates are over 200 in 1,000 births. These three wards accounted for 72 babies dying under one year of age out of 372 babies born, 54 deaths being from pulmonary and intestinal causes, probably preventable, at least coming under the category most easily influenced by the slightest child welfare endeavor. (The Mayor, Board of Health and Rotary Club all promised to see that there was a local effort put forward before the warm weather of 1920.)

Four other centers have remarkable low rates considering their location, type of population and lack of effort on the part of the community to influence the rate. Fort Francis and Kenora have high birth rates, mixed populations and death rates of 108 and 84 respectively per 1,000 births. Both have questionable public water supplies, both being chlorinated. Galt and Guelph show 76.3 and 89.02 per 1,000 births. Guelph's birth rate is the lowest encountered in any town or ward in a city studied.

4. Under the groups influenced by pre-natal care, startling figures were disclosed: One still birth was noted for every 92 pregnancies registered in Fort Francis; 77 in Kenora; 28 in Guelph; 18.3 in Galt, and in Fort William, Wards 1, 2, 3, 4, respectively, there were 1 in 17.8; 21.8; 43, and 17.6, respectively.

Municipality	Ancestry of Citizens	Births 1919	Births per 100,000 Pop.	Deaths under 1 year of age	Deaths per 1,000 born	Still births	Deaths under 7 days old	Deaths from intestinal causes	Deaths from pulmonary causes	Assessors population 1919
<i>Ward—</i>										
I	British	65	3250	4	61.5			2 or 50%	0	2063
II	"	47	2099.1	5	106.4			3 or 60%	1 or 20%	2239
III	"	83	2206	10	120.48			5 or 50%	3 or 30%	3767
IV	Cosmopolitan	168	2734.8	35	208.3	24	17	22 or 62.8%	8 or 22.8	6143
V	"	114	3275.8	19	167.5			7 or 38%	4 or 21%	3480
VI	"	90	3241.2	18	200.			8 or 44%	5 or 27%	2777
I	$\frac{2}{3}$ non-British Cosmopolitan	267	3454	45	168.53	15	4	13 or 28.8%	4 or 8.8%	7730
II	British	153	2523	16	104.57	7	3	4 or 8.8%	1 or 2.2%	6064
III	"	43	2226	2	46.51	1	1	1 or 2.2%	0	1931
IV	$\frac{1}{3}$ non-British Cosmopolitan	141	3388	19	134.75	8	5	6 or 13.3%	3 or 6.6%	4161
Fort Frances	$\frac{2}{3}$ British	92	3680	10	108.6	1	4	4 or 40%	1 or 10%	2512
Kenora	Cosmopolitan	153	3060	13	84.	2	7	4 or 50%	1 or 12½%	5031
Galt	British	275	2211.6	21	76.3	15	5	2 or 9.52%	2 or 9.52%	12434
Guelph	"	337	1978.6	30	89.02	12	7	11 or 36.6%	5 or 16.6%	17032

Fort William Sault Ste. Marie

One death under seven days occurred in the same communities in every 23 pregnancies in Ft. Francis; 21.8, Kenora; 48.1, Guelph; 55, Galt, and Fort William, Wards 1, 2, 3, 4, respectively, 66.75; 51; 43, and 28.2

Still births, combined with deaths under seven days, show an incidence in the same communities as follows: 1 in 18.4 registered pregnancies in Fort Francis, 17 in Kenora, 17.73 in Guelph, 13.75 in Galt, and Fort William, Wards 1, 2, 3, 4, respectively, 14.05; 15.3; 21.5; 10.84.

The factors influencing this phase of the study are not all evident. Municipal and personal sanitation are thought not to be factors. The educational status of the individuals, in the home, does not seem to constantly influence in one direction. The prevalent practice of mid wifery (so-called), shows an influence in the rate of still births, but not in the deaths under 7 days, or the combined rate.

The best showing of any area studied is made by Ward 3 of Fort William, where the greatest amount of child welfare accomplishment is evident, probably due to the keen motherhood employing the most alert, attentive physician, without consideration of expense, from inception to the completion of Puerperium, and insisting upon and receiving continuous supervision during the entire pre-natal period. There seems to be a relation between the rate of still births and the profession, but it is not the only constant feature. For instance, one community having still births registered by eight different physicians, had practically 50% registered by one physician. In another community studied, one physician registered 58.3% of the still births for 1919, and actually attended 14.8% of the mothers registering babies as born for the same period in the municipality.

It must be evident that something is urgently needed to be done forthwith to place our fingers upon the remedial causative factors in this pre-natal field.

Industrial Hygiene: Need of Research in Canada

*Prepared under the direction of the Committee on Industrial
Fatigue of the Honorary Advisory Committee on Scientific
and Industrial Research.*

THE science of industrial hygiene is a young science since, while from the early days of industry humanitarians have endeavoured to reduce the more flagrant hardships of the worker, it is only within recent days that general recognition has been given to the importance of physiology in relation to the problems of industrial life. It is probably true, as a broad generalization, that the ever-increasing volume of welfare work on this continent and in England arose out of general social and humane principles and, with possible rare exceptions, owed little for direction to scientific and economic evidence. Even the enlightened employer followed his own ideas of what should be done for his employees without appreciation of the problem as a scientific one calling for investigation and research into the actual facts of the case—into the true relationship existing between the working conditions and the actual output of the workers.

Recognition of the fact that in the science of physiology should be sought definite criteria for the ideals of working conditions was astonishingly late in coming. Thus, in 1912, Josephine Goldmark, in her book *Fatigue and Efficiency*, sought to present facts collated from the modern scientific study of fatigue as a *new* basis for legislation, appealing direct to physiological, chemical and psychological science "for aid in the practical problem of reducing the long working day in industry." Similarly, the final **report** of the British Health of Munitions Workers' Committee emphasises the absence up to 1914 of any scientific method in dealing with problems of industrial hygiene. The committee found that "efforts to protect the health of industrial workers had been based on the need of mitigating or removing evils as they arose, rather than on the actual result of scientific enquiry and research." They pointed out that while increasing attention had in recent years been devoted to the critical examination of certain "dangerous" trades, they found themselves with totally insufficient data on the effect of the ordinary "non-dangerous" trades on both men and women. Again they stated that "the proper length and distribution of hours of labour—spells, pauses, overtime—in relation to output is another problem which has never been scientifically explored. . . . Once

more, though attention is now being given to so-called 'scientific management' evidence is still wanting to show how far the speed of working can be increased or the method modified without involving an undue physical and mental strain on the worker, which counterbalances or even destroys the advantages claimed." In conclusion, the Committee urged the "imperative need of a more accurate understanding and a firmer and more comprehensive grasp of the whole problem of health and physique in relation to industry."

Equally tardy and obscured in the same way by the lack of scientific data has been the realization of the fact that health and efficiency go hand in hand. In the epigram on which the British Committee base their conclusions "without health there is no energy and without energy there is no output." It is not too much to say that on application of this great maxim the prosperity of modern industry will largely depend. Sporadic recognition of the principles there has, of course, been, and many employers must have discovered that reforms of working conditions in their plants undertaken in the general interests of the welfare of their employees have not merely been so much unremunerative outlay, but have proved good, economic investments leading to greater efficiency and greater production. Thus, as early as 1894, Sir William Mather, reviewing the actual result on output of an experiment in reduced hours of work wrote, "We seem to have been working in harmony with a natural law, instead of against it, as in the unnatural conditions of men beginning the work of the day without provision required by nature for the proper exercise of their mental faculties and physical powers. . . . *Of this I am assured, that the most economical production is obtained by employing men only so long as they are at their best—when this stage is passed there is no true economy in their continued work.*" That recognition was not general however is witnessed by the experience of the war, the early days of which saw frantic efforts to get greater output by increasing the hours of work. That the method proved ill-advised is seen by the steady movement during the course of the war towards reduction of hours and restriction of overtime, Sunday and night work. Thus the Committee referred to above reported "there can be little doubt that there is an increasing recognition on the part of both employers and workers of the broad fact . . . that substantial reduction of hours can be effected without any reduction of output. Whereas, at the beginning of the war there was a general belief that longer hours necessarily produced larger output, it has

now become widely recognized that a 13 or 14 hour day for men and a 12 hour day for women, excepting for quite brief periods, are not profitable from any point of view."

During the war the two correlative sides of the problem of industrial hygiene, the economic and the sociological, were presented simultaneously with peculiar poignancy. The need for output on a scale not hitherto conceived of coincided with the need no less urgent of conserving man power. Thus the central problem of industrial hygiene—efficiency and health—was presented to each of the combatant nations as a problem in urgent need of solution. The problem as it appeared to the United States, together with the suggested lines of the solution, are specifically stated in a report drawn up in May 1918 by the Advisory Committee on Industrial Medicine and Surgery, a sub-section of the Medical Section of the Council of National Defense. Both may suitably be summarized here since, while devised as has been seen as a war measure, they apply in principle with equal force to peace conditions, and serve to show in broad outline the scope of industrial hygiene.

The Problem:

- (1) To meet the military need of greatly increased production.
- (2) To offset the drain on man power in industry brought about by raising the military forces.
- (3) To ensure adequate medical service for the civil population.

To meet the problem the Government must

- (1) Provide against unnecessary human waste in industry and society during the war.
- (2) Increase output by maintaining workers in good health.
- (3) Avoid preventable deaths and disabilities from accident and disease.
- (4) Restore to full producing power in the shortest possible time sick and injured workers.
- (5) Provide healthful places in which to work.
- (6) Provide healthful homes and communities in which to live.

Now, although the emergency of the war is over, the principles set out above are no less important in the reconstruction period, and are essential for each country unless it is to fall behind in the economic competition of nations. That England has emerged from the war with a full recognition of the issues at stake is witnessed by the fact that the year 1919, saw the establishment both of a Min-

istry of Health and of an Industrial Fatigue Research Board with the following reference: "To consider and investigate the relations of the hours of labour and other conditions of employment, including methods of work, to the production of fatigue, having regard both to industrial efficiency and to the preservation of health among the workers."

Similarly, in U. S. A., the subject of industrial hygiene is rapidly increasing in importance. The valuable research work of the United States Public Health Service, and the United States Department of Labour, is continuing, and at the present time the latter is organizing a special Industrial Hygiene Division under the recently established Working Conditions Service. Meanwhile, associations of industrial physicians formed during the war are continuing to meet, courses in industrial hygiene are being introduced at some of the universities, and are under contemplation at others and literature on the subject is steadily increasing, and is gaining in publicity. An important contribution will doubtless be afforded by the official report of the Rockefeller Foundation on the results of the conference on industrial hygiene called by them last November "with the object of ascertaining if there was unanimity of opinion upon how industrial hygiene should be organized as regards instruction propaganda, research and practical application."

The question of the advisability of similar work being undertaken in Canada was raised by the Honorary Advisory Council for Scientific and Industrial Research early in 1919. After consultation with professors of physiology in the various Canadian universities, and with the Council of the Canadian Medical Association the Honorary Advisory Council instituted in the spring of the same year the Committee on Industrial Fatigue. The Committee is constituted as follows: Professor J. J. Macleod, Department of Physiology, Toronto University (Chairman); Professor Asselin, Department of Physiology, Laval University, Montreal; Professor C. Dagreau, Department of Physiology, Laval University, Quebec; Professor D. Fraser Harris, Department of Physiology, Dalhousie University, Halifax; Mrs. George Hambleton, Ottawa, representing women's organizations and social work; John Lowe, Esq., The Montreal Cottons, Ltd., Valleyfield, P.Q.; Dr. A. B. Macallum, Administrative Chairman, Honorary Advisory Council for Scientific and Industrial Research, Ottawa; J. A. McClelland, Esq., representing the Department of Labour, Ottawa; Professor Swale Vincent, Department of Physiology, University of Manitoba, Winnipeg; Professor J. Tait, Department of Physiology, McGill Uni-

versity, Montreal; Professor W. Tait, Department of Psychology, McGill University, Montreal.*

It appeared to the Committee from the offset impracticable at the present time to conduct in Canada the extensive investigations into problems of industrial fatigue which are being carried out in England and the United States, both more effectively and more economically, than would be possible here. The Committee would, it was accordingly felt, serve its most useful purpose by establishing liaison with similar bodies in other countries, keeping in touch with their work, and in turn bringing the results of their scientific investigations and researchs into the access of Canadian industry. With this object the Committee proposes to establish offices in the chief industrial centres; one has already been set up in the Medical Building of Toronto University, and a small reference library on industrial hygiene is being collected there. The publications of the English and American Departments and Associations will be kept on file, certain of the more useful periodicals will be taken, others where articles on industrial hygiene appear from time to time will be examined for ~~material~~ pertinent to the subject and bibliographies on the various phases will be prepared. It is hoped that in this way the service will be of direct use to industry as a general intelligence bureau where manufacturers interested in promoting the efficiency and welfare of their employees or confronted with some specific health problem of their own individual industry may obtain accurate and detailed information, both as to the general growth of scientific knowledge on the subject, and as to the most up-to-date methods and solutions approved by the actual experience and scientific investigation of other countries. At the same time certain practical surveys in selected fields will be undertaken by the Committee from time to time, and in cases where definite investigation or scientific experiment seems desirable and feasible the Committee are prepared to assist in such research. In this respect they would at all times welcome suggestions from manufacturers as to problems which might suitably be explored.

A further duty of the Committee will be consideration of the educational requirements for teaching the principles of industrial hygiene and for training technical experts and field workers. In this connection a sub-committee has been formed to consider the facilities at present available in Canada, and recommend what additions should be made.

*The Committee originally included Professor A. P. Knight, Department of Physiology, Queen's University, Kingston, who has since resigned.

A Plan for a More Effective Federal and State Health Administration

FREDERICK L. HOFFMANN, LL.D.

Third Vice-President and Statistician the Prudential Insurance Company of America

(Continued from the April issue).

As a practical illustration, reference requires only to be made to the work of the China Medical Board of the International Health Board of the Rockefeller Foundation and the considerable expansion of American medical missionary services throughout China during recent years.*

HOSPITALS AND INSTITUTIONS

The statistics of hospitals and institutions are most urgently in need of being standardized. There is such a large variety of blanks and forms, and such an unfortunate blind conformity to antiquated methods no longer applicable to modern requirements, that drastic reforms are called for. Institutional morbidity statistics are of a high order of intrinsic value and practically useful in connection with a variety of medical, social and economic problems. The work of this section should be intelligently coordinated to the corresponding efforts of the College of Surgeons, the American Public Health Association, the American Hospital Association, etc.

The results of a conference on hospital standardization have been issued in the form of a bulletin of the American College of Surgeons (Chicago), 1917. These were followed by a bulletin dated March, 1918, on Standards of Efficiency, in connection with which it is pointed out that "Ultimate results of hospital standardization are a matter of evolution, of good will, of honesty and fearlessness in facing facts, of team work and of patience". Conceding that widely varying conditions make hard and fast standards quite impossible, it is said, however, that "Remembering these things, there is nothing insurmountable in the task". The minimum standards include a recommendation regarding

*Among the more important publications on the health problems of China and the Chinese are the medical reports of the China Maritime Customs Service and the *China Medical Journal* of the China Medical Missionaries Association. The most useful source of information on the medical problems of China is the treatise on the "Diseases of China", by Jeffries and Maxwell, London, 1910. The most convenient summary of existing health conditions is the report on Medicine in China by the China Medical Mission of the Rockefeller Foundation, New York, 1914.

case records, summarized in the statement that "The hospital keep in a systematic manner case records of its patients, together with a convenient summary of each case, and that it utilize these records in analyses of its medical and surgical efficiency". Most of the hospital reports issued at the present time, at least as regards the statistical data, are practically useless for scientific purposes. Efforts at standardization through special committees of the American Public Health Association and of the American Hospital Association have led to no material improvements in a deplorable situation. The essential function of a hospital is, of course, the treatment and care of patients, and prior consideration must be given to matters of equipment, medical staff, business management, and even financial accounting, but there is no justification for the general disregard of the requirement that the hospital experience data should be made available for scientific and general practical purposes. In such an otherwise admirable work as "The Modern Hospital", by Dr. John Allen Hornsby, the subject of proper morbidity record-keeping and the urgency of uniformity and standardization are entirely omitted. Among the efforts to bring about an improvement, the most promising is the work of Dr. E. A. Codman (*Boston Medical and Surgical Journal*, August 30th, 1917), subsequently enlarged upon in an exceptionally useful study of hospital efficiency, as demonstrated by the case reports of the first five years of a private hospital. Of much value also is a monograph on the care of hospital records, according to the methods of the Massachusetts General Hospital, by Grace Whitney Meyers, a second edition of which was issued in 1915.

In recognition of the need for morbidity statistics of general hospitals and other institutions for the care of the sick, the U.S. Public Health Service in 1917 published a brief report by Mr. Edwin W. Kopf, in which the need for a Federal voluntary registration area for hospital morbidity statistics is emphasized and sustained by observations derived from a reasonably thorough analysis of available information. Mr. Kopf observes that "The registration and statistical analysis of hospital morbidity data in a Federal voluntary area can be accomplished if a sufficient number of representative general and special hospitals will agree (a) to adopt in common a nomenclature and classification of diseases and conditions; and (b) if they will transmit to a central Federal agency detailed tabulations of their sickness experience upon a set of uniform reporting schedules". Mr. Kopf also points out that "hospitals will be more ready to agree to enter a voluntary registration area if such action will not seriously disturb present record routine or run up clerical costs". The experience which was had by the Committee on Uniform Hospital Statistics of the American Public Health Association, however, proved conclusively that the problem is practically hopeless without

active Federal co-operation. Even so apparently simple a question as the adoption of a more satisfactory uniform disease nomenclature was brought nearer to a final solution only after a conference participated in by Federal departments having to do with medical and related matters, and civilian agencies, including life insurance companies, all of which unanimously agreed to have such a new and thoroughly standardized nomenclature of diseases prepared by the Division of Vital Statistics of the U.S. Census.

It needs, therefore, no further arguments to sustain the point of view that the whole subject of hospitals and institutions demands a broader interest on the part of the Federal Government through the U.S. Public Health Service. The experience gained by the investigations, for illustration, of the committee appointed to inquire into departments of health, charities, and Bellevue and allied hospitals in the City of New York, 1913, as well as through inquiries into the more specialized aspects of the problem, such as standardization of social work in hospitals, a preliminary discussion of which has been contributed by Miss Ida M. Cannon, R.N., N.Y., 1918, the problem of the small-community hospital, than the solving of which there is perhaps no more pressing need to-day in the furtherance of rural health and hygiene, and, finally, the county hospital, which was made the subject of a special discussion by the Commonwealth Club of San Francisco, with particular reference to the needs of California, emphasizes the necessity for an active and sustained interest on the part of the Federal Government, to be realized only through a thoroughly coordinated Federal and State health administration.

PUBLIC HEALTH AND HOME NURSING

There is an urgent demand throughout the country for a more effective organization of public health and home nurses on the basis of existing organizations, chiefly the National Organization for Public Health Nursing and the Home Service Section of the American Red Cross. As observed in a discussion on *The Public Health Nurse* in its relation to the work of the Children's Bureau, "The first step in the organization of adequate public health nursing service is to form a strong local committee, representing the local health department, the medical profession, the women's clubs, etc." In other words, public health and home nursing, whether on a paid or a voluntary basis, must be, as far as practicable, coordinated to the varying needs of the local health administration. The urgency of a more intelligent co-operation became especially apparent during the epidemic of infantile paralysis in 1917 and the influenza-pneumonia epidemic of 1918. In consequence of the war activities of the American Red Cross a large number of

women have been trained in home nursing, whose future services should not be lost to the nation. There is also an urgent demand for better training in the essentials of first aid as applied to the needs of industry and as perhaps best illustrated by the practical results which have been achieved in the organization of first aid courses in mining under the direction of the U.S. Bureau of Mines in co-operation with the American Red Cross. Of considerable promise as regards the near future is the medical-unit plan of the Aetna Life Insurance Company, in successful operation in a number of industrial districts, one of which has been described in *Hospital Management*, December, 1918. The pioneer insurance company to undertake home nursing on a large scale is the Metropolitan of New York, the plans and methods of which have been worked out with admirable thoroughness under the direction of Dr. Lee K. Frankel. As a basis for a more effective organization and active cooperation of private and public agencies, a survey is required, more or less in conformity to the plan of Miss Helen F. Boyd, as described in her report on Public Health Nursing in Connecticut, issued by the State Department of Health, 1918. Among other recommendations, Miss Boyd includes the following:

1. There shall be appointed a public health nurse who shall be directly responsible to the State Commissioner of Health. She shall be a graduate, registered nurse with experience in public health work.
2. Her duties shall be: (a) To encourage communities to organize for the support of public health nurses where such an organization has not before existed. (b) To advise with associations or individual nurses already in the field as to the development of their work, especially in the line of child-welfare and tuberculosis work.
3. The first nurse as her work increases shall be given assistants, with the same qualifications for the work as she has, who shall, if the work justify it, be four in number, one for each of the sanitary districts. The first nurse shall supervise and direct the work of the assistants.

MORTALITY AND MORBIDITY STATISTICS

The section on mortality statistics is not intended to include the work of the Division of Vital Statistics of the Census Office. It may safely be assumed as a foregone conclusion that the most serious objections would be raised against separating the Division of Vital Statistics from the Division of Population Statistics of the Census, both of which are closely interrelated in the primary object of disclosing the population and mortality tendencies of the nation, not only at different censal periods but during intercensal years as well. There are, however, other practical objections, among which perhaps the most important is the valid reason that the mortality data of the nation are, after all, the only

true index of health progress in certain well-defined directions, and that the control of the evidence relating to such progress should not be intradepartmental but extradepartmental, in so far as that can possibly be arranged for. No one has ever raised convincing objections against the office of the Registrar-General of England and Wales not being directly connected with the department of the Medical Officer of the Local Government Board, and while suggestions have been made for the transfer of this department to the proposed "Ministry of Health", the situation in England is, after all, essentially different from what it is in this country. The registration of diseases is quite another matter, since the morbidity is a much more correct current index of health and well-being than the mortality, even from strictly communicable or transmissible diseases. It may be said in this connection, however, that unless the existing methods of weekly abstracts of sanitary reports are materially perfected and improved in important details it would seem best to discontinue their publication entirely. This conclusion, however, does not apply with the same force to international morbidity statistics, where imperfections are more excusable. To publish statistics for one week and not for another and to leave gaps which frequently afterwards can not be bridged is to impair materially the true value of the returns under consideration, so that if they can not be improved they had better be done away with. Attention, however, may be directed on this occasion to the admirable plan worked out by the Division of Vital Statistics of the Census Office, under which weekly reports for some fifty representative cities of deaths from all causes and separately for ages under one are transmitted by wire and made public in a consolidated form through the Associated Press within three days after having been assembled. The value of this method was particularly emphasized during the recent epidemic of influenza and pneumonia.

To be continued.

Social Background

Standards of Child Placing*

MRS. A. D. FISHER.

I REALLY feel my little talk will not in any way measure up to coming before you all, because I am not in any way an author—the title used on the Programme. I feel very diffident about it on Home Finding, what work I have done along this line has been so far very much of an experimental nature, and in addition I would like to say I do not pretend to be a public speaker, but being intensely interested in and very sympathetic toward the young dependent child, and from experience gained as a Board Member of “The Infant’s Home,” the idea was very forcibly impressed on my mind that Institutional Life, no matter how good the care might be, was not the life for the normal dependent child. I tried to study conditions and causes and work out the whys and wherefores of the cases which came to us, and have arrived at the conclusion that provided the right type of home is found for the right child that the Home Finding or Child Placing System is the most perfect solution to date for the care of the dependent child.

Let us, then, briefly look at the underlying theory which stresses Home Finding as against Institutional Life for the dependent child, the child who through desertion, inability or unsuitability of parents or friends to provide for it, or who through any of the cruel circumstances of life has to be handed over to public care. The family is the oldest human institution antedating both Church and State. It is the fundamental and necessary unit for the development of humanity and civilization. The home has always been the nursery of life. As the best physical, moral and social development of child life takes place in the individual home, we feel every effort should and must be made to handle the dependent child in this same way.

Among the advantages to be gained from the individual home as against the institution are the following:

*An address given on March 11th, 1920, for the Neighbourhood Workers’ Association of Toronto, as one of a series of lectures arranged under the auspices of the Social Service Department, University of Toronto.

Dependent children would not have to be barred from admission to an institution owing to epidemic.

No child would have to be refused admission through an institution being overcrowded, this field is unlimited.

It would give individual and motherly care for the frail, ill-nourished, love-hungry little souls to whom life has been hard and cruel, and who have been denied wholesome family life, and what should be the one right of childhood, the right of a pair of mothers' arms about the child's neck, if not the natural parent, then some one whose love for little children is so great that the child (at least while young) may never know the difference.

The following testimony from one of the best matrons who ever lived, after many years' experience proves conclusively, I think, that institutional life for the child is not ideal, when she says, "Poor little children, we gave them love and good care, but we were obliged to deny them so much which rightly belonged to their lives as children. Young as most of them are, they know, feel and appreciate the advantages of the new way of individual homes, far better than we older ones."

Many people ask, is all this work with the type of children we have to handle, worth while, and if you could see many of the babies that are brought to the Infant's Home, you would feel this question was quite justified. However, the following extract from an address by Dr. L. Holt, Professor of Children's Diseases in Columbia University, would pretty well answer this question, and prove that we are quite justified in our efforts to save the lives of these babies. Dr. Holt says, "The problem of infant mortality is one of the great social and economic problems of our day. No resources of the State need so much to be conserved as do its children. A nation may waste its forests, its water power, its mines, and to some degree even its land, but if it is to hold its own in its struggle for supremacy, its children must be conserved at any cost. On the physical, intellectual and moral strength of the children of to-day the future depends. In all training and education physical consideration must come first.

Most children, who in infancy are regarded as physically unfit, were healthy at birth, and are merely the victims of a bad environment, improper feeding and neglect, conditions which it is quite possible to remove, and when the obstacles are overcome, these infants have the same chance to survive as others. How many of the world's brightest geniuses might have been lost? Who can say? It is hard to tell who are the unfit. A high infant mortality results

in a sacrifice of the *unfortunate* not the *unfit*. For example, take Newton, a posthumus child, so small and frail at birth they thought his life would be limited to hours, and yet, through skilful nursing and tending in early years he lived fourscore years and revealed to us the laws of the universe. If he had perished because weak when born, England would not have been what she has in the world. Is not the preservation of these precious little lives of our nation a most sacred and patriotic work for us all just now, and should it not be carried on in the best possible way? It means service of the most vital kind to our country.

In defining Home Finding, we mean the finding of real homes for children, for days, for weeks, for months or for years, as the various cases demand, and after very carefully inquiry and investigation, placing our children in good normal homes, where the individual, physical, mental, moral, religious and social development of each child is a matter for careful and constant supervision and oversight—oversight at once sympathetic and elastic in its understanding. With our plan of Home Finding our Homes will be divided into three classes—Free Homes, Boarding Homes and Homes for Adoption.

Take the first class: Many people are willing to take a child for a time at least who do not feel (particularly in the case of very young children) that they really do not want to adopt them at least, not till they know just what the child is like, etc., but are willing to give them a good normal home, provide for them, giving love and good care, but not legally bound in any way.

By the second class: Boarding Homes.—We do not mean baby farms or licensed homes where numbers of children are taken, but where possible we could find just the right home for some very delicate, ill-nourished child, where excellent care and love would be given, but where the actual expense, or perhaps in some cases, a little more, or maybe only the cost of special food, etc., would have to be met by us. Through payment many high class people as caretakers are to be found, who could not afford to give their services otherwise. Then, of course, the Homes for Adoption, you all know and understand. I might say, all the children put into homes by us would be under our care and supervision, and it would entail more and very expert workers to keep in touch with these cases, particularly outside the city, as our work increases, and would doubtless cost us a little more, but would a little extra expense not be warranted if it mean a material saving in child life?

Instances of what has actually been accomplished through this placing out in homes with individual attention of miserable puny babies, that had practically been given up to die, and yet they have lived and grown into healthy children. Some of these cases you would hardly credit, had they not been seen before and after, and their cases watched all the way through with special interest. Some people are very discouraging, and say it is not possible to get people to take these delicate children and care for them, either for love or money. This attitude does not in the least discourage me. I feel people who talk that way are lazy and indifferent and very unpatriotic, and I would indeed feel very sorry for the child born to people who feel this way, but I take courage and glory in the fact of the knowledge of many who are doing this work now, feeling if some people have been found to do it, there must be many others.

From appeals we have made we feel confident there are many good homes to be found. In this connection, a very touching incident, in response to an appeal we made, came to us in the form of a letter saying, "I will take a child and give it love and good care, my only child lies sleeping in France." Can you imagine anything more beautiful than this, a mother trying to ease her heartache and forget her yearning for her boy by giving love and care to one of these needy little ones? Also, another instance of a woman here in Toronto, who has already taken one child and loved it into the semblance of a real child, not an institutional child, then it was adopted out entirely. She is now ready to take another and do likewise for it. To quote her own words: "It is simply wonderful what a little love and care does for these children. Fatten them up a little, tie a big bow on their hair, put a pretty frock on them, and they will be taken off your hands long before you are ready to part with them." We realize that if this work is to be well done, it will be slow, take a great deal of time and patience, also a great deal of publicity, and we also realize the return in this work will be just in proportion to the amount of human effort we are willing to put into it.

We find many people, in fact, the majority, who want a child for adoption, want the prettiest baby we have, as a sort of beautiful doll, that they can dress up and play with, and while to me all our babies are beautiful, the really pretty child is the exception, rather than the rule, and in many cases, if we can come in personal contact with the foster parents and impress on them that they are not in any way bound to keep the child, but to take it and give it a trial, and just see what little real love and fondling will do for it.

We also try to impress on them that beauty is only skin deep, and there may be wonderful qualities awaiting development back of a plain face, or that they should consider how hard life has been for these kiddies, and that it might be an interesting experiment to take a picture of the child now when it is taken into their heart and home, and another after a year's loving care, and note the difference. A child will respond so quickly to love and attention, that the whole expression seems to change.

However, we believe, if this work is once understood and people able to grasp just what it will mean to our nation, good homes are waiting for all the children, the fire is burning, there is oil in the lamp, a place to play in the yard, there are vines or gardens, an apple tree or lilac bush to distinguish the seasons, and there are plenty of loving Christian men and women who will welcome children if the great need is brought home to them. It should not seem strange that this is true. The family must be the nation's salvation. Yes; just as truly as the sculptor sees the angel in the unseemly stone or the artist discerns a masterpiece in some musty, time-stained canvas in attic or cellar, so the heart of Christian motherhood sees the image of God in these neglected needy little ones, and that image restored through loving ministration and workmanship. The child is the hope of the nation, and the world moves forward on the feet of little children.

Every Health Officer should be a member of the Association.



The Provincial Board of Health of Ontario

CASES AND DEATHS REPORTED BY LOCAL BOARDS OF HEALTH OF COMMUNICABLE DISEASES FOR THE MONTHS OF MARCH, 1920.

COMPARATIVE TABLE.

<i>Diseases</i>	March, 1920		March, 1919	
	<i>Cases</i>	<i>Deaths</i>	<i>Cases</i>	<i>Deaths</i>
Smallpox	446	7	39	1
Scarlet Fever	560	29	445	10
Diphtheria	451	56	413	48
Measles	1256	23	39	0
Whooping Cough	136	31	69	4
Typhoid	27	7	13	3
Tuberculosis	213	173	242	196
Infantile Paralysis	—	—	18	12
Cerebro-Spinal Meningitis	1	1	—	—
Influenza	3055	502	—	703
Acute Influenzal Pneumonia	—	232	—	—
Acute Primary Pneumonia	—	602	—	—
	6143	1663	1278	977

NOTE.—The 703 deaths from Influenza and Pneumonia in March, 1919, was the 6th month of the epidemic which was disappearing from the Province.

VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH FOR MARCH, 1920.

	1920	1919
	<i>Cases</i>	<i>Cases</i>
Syphilis	64	97
Gonorrhoea	77	183
Chancroid	2	4

NOTE.—It is quite apparent many cases are not reported by physicians as required by the regulations.

JOHN W. S. MCCULLOUGH.

The most gratifying feature regarding the health of the Province is the marked decrease in cases and deaths of Influenza and Pneumonia for the month of March compared with the previous month. During February we had 2,315 deaths reported, and for March 1,336, a reduction of 57%. Should this rate of decrease continue, which is most likely, the duration of the epidemic will be much shorter, with a greatly reduced death rate than the Province experienced in the first outbreak in 1918, when 5,623 deaths were recorded in the first two months.

Smallpox that has been prevalent in many localities in the Province since November last is abating. During the five months there have been 5,078 cases reported with 24 deaths. Of this number the City of Toronto contributed no less than 2,872 cases, or 54% of the whole. The cases and deaths by months are as follows:

	<i>Cases</i>	<i>Deaths</i>
November, 1919	1,128	0
December, 1919	1,433	2
January, 1920	1,188	6
February, 1920	883	9
March, 1920	446	7

Diphtheria shows a decrease from 636 cases and 70 deaths in January, and 551 case and 84 deaths in February to 451 cases and 56 deaths in March, or death rate of 12.0 in 100. Scarlet fever shows a reduction of 80 cases compared with February last.

"One-third of the quota of new members enrolled".—First report from Nova Scotia.

News Items

A well attended meeting of the Child Welfare Section of the Canadian Public Health Association was held in the Hospital for Sick Children, Toronto, on April 10th last. Dr. Lionel Lindsay, of Montreal, chairman of the section, presided. The splendid grant of \$5,000 made to the section by the Canadian Red Cross Society, has rendered it possible for the Child Welfare Section to initiate immediately, a most energetic movement, along educational lines looking to the reduction of infant mortality throughout Canada. Close co-operation with the Federal, Provincial and Municipal Departments of Health will, of course, be effected. The appointment of a permanent full-time secretary for the section is to be made as soon as possible.

Dr. C. J. O. Hastings, Medical Officer of Health, Toronto, has been enjoying a well deserved rest in Atlantic City.

Dr. F. C. Middleton, of the Bureau of Public Health, of Saskatchewan, Regina, has been doing graduate work in Public Health in the Department of Hygiene, University of Toronto, during the past three months.

Dr. A. Grant Fleming has been appointed Director of Laboratories in the Department of Health, Toronto, at a salary of \$4,000 a year.

The splendid film, "The End of the Road," was shown to packed houses in Massey Hall, Toronto, recently. Subsequent showings of the film in London, Windsor, Peterboro and elsewhere have also been made. This work is under the auspices of the Canadian National Council for Combating Venereal Diseases. Branches of the Council are being organized throughout Ontario and in the other provinces.

Dr. Gordon Bates, General Secretary of the Canadian National Council for Combating Venereal Diseases, has just returned from Montreal, where preliminary arrangements were made for the organization of the Quebec Provincial Branch of the Council.

Plans for the annual meeting of the Canadian Public Health Association for the Prevention of Tuberculosis, the Canadian National Committee for Mental Hygiene and the Canadian National Council for Combating Venereal Diseases, in Vancouver in June, are almost complete. Elsewhere in this number more details in regard to programme are given.

It is a pleasure to be able to state that Dr. Frederick Montizambert, of the Federal Department of Health, Ottawa, has quite recovered from his recent serious accident.

The deepest sympathy of THE PUBLIC HEALTH JOURNAL is extended to the Hon. Dr. Wm. F. Roberts and Mrs. Roberts, of St. John, in their recent bereavement.

The Provincial Board of Health of Ontario has had a large appropriation voted by the Legislature for work in Maternal and Child Welfare. Comprehensive plans for the work at present are being prepared. The Chief Officer of Health, Dr. J. W. S. McCullough, is to be congratulated on securing funds for this most important work. Miss Mary Power is in charge of the Child Welfare Bureau.

Dr. George D. Porter, General Secretary of the Canadian Association for the Prevention of Tuberculosis, has returned from Prince Edward Island, where he held a large number of most successful meetings. The Association has been requested to undertake campaign work in almost every Canadian province.

The Canadian National Committee for Mental Hygiene has recently received a grant from the Canadian Red Cross Society to aid in the valuable work which the Committee has in hand.

Dr. B. E. Guyatt has received an appointment in the Division of Venereal Diseases of the Provincial Board of Health of Ontario.

The Canadian Association for the Prevention of Tuberculosis will meet Monday and Tuesday, June 21st and 22nd, in Vancouver, under the Presidency of the Hon. Dr. Schaffner, of Winnipeg. Papers are already promised from Drs. Parfitt, Byers, Stewart, Vrooman and others.

Editorials

CANADIAN RECOGNITION OF THE SCIENTIFIC BASIS OF INDUSTRIAL HYGIENE.

WE publish in this issue an article emphasizing the importance of recognizing the relation of physiology to industrial working conditions. Physical health is the fundamental basis of efficiency, and, accordingly, it is in the interests not only of the general welfare of the nation, but of its material economic prosperity to discover the effects of all the various factors of working conditions on health and output. In a word, the article is a plea for the recognition of industrial hygiene as a science, and for the necessity of scientific investigation, research and experiment into its problems.

It is the object of the Committee on Industrial Fatigue, which has recently been formed under the Honorary Advisory Council for Scientific and Industrial Research, to act as a national information bureau on the principles of industrial hygiene, as they are evolved from scientific research or actual working experience, whether in Canada or elsewhere. It is hoped to make readily available for all who are concerned, Public Health bodies, Labour Departments, general welfare associations and manufacturers, information both on the general progress of industrial hygiene in Canada, England and the United States, and on the most recent and scientifically approved solutions of specific problems. The Committee is constituted as follows: Professor J. J. R. Macleod, Department of Physiology, Toronto University (Chairman); E. A. Bott, Department of Psychology, Toronto University (Hon. Secretary); Professor Asselin, Department of Physiology, Laval University, Montreal; Professor C. Dagneau, Department of Physiology, Laval University, Quebec; Professor D. Fraser Harris, Department of Physiology, Dalhousie University, Halifax; Mrs. George Hambleton, representing women's organizations and social work; John Lowe, Esq., The Montreal Cottons, Ltd., Valleyfield, P.Q., representative of Canadian Manufacturers' Association; Dr. A. B. Macallum, Administrative Chairman, Honorary Advisory Council for Scientific and Industrial Research; J. A. McClelland, Esq., repre-

senting the Department of Labour, Ottawa; Professor Swale Vincent, Department of Physiology, University of Manitoba, Winnipeg; Professor J. Tait, Department of Physiology, McGill University, Montreal; Professor W. Tait, Department of Psychology, McGill University, Montreal.

Anyone desiring information or wishing to obtain the Committee's assistance in investigating any specific problem should apply to the Secretary, Committee on Industrial Fatigue, care the Medical Building, Toronto University. Eventually it is hoped to make the service of the Committee more quickly available for all Canada by establishing offices throughout the country.

Splendid—First returns from Quebec indicate that the number of new members being enrolled will exceed the quota by fifty per cent.

Joint Congress

8TH ANNUAL CONGRESS CANADIAN PUBLIC HEALTH ASSOCIATION

51ST ANNUAL MEETING OF CANADIAN MEDICAL ASSOCIATION
CANADIAN ASSOCIATION FOR PREVENTION OF TUBERCULOSIS
CANADIAN NATIONAL COMMITTEE FOR MENTAL HYGIENE
CANADIAN NATIONAL COUNCIL FOR COMBATING VENEREAL DISEASES

VANCOUVER, WEEK OF JUNE 21, 1920
Public Health Sessions, June 21, 22, 23.
Canadian Medical Sessions, June 22-25th.

Convention Headquarters, University of British Columbia.

Transportation.—Summer Tourist Tickets will be on sale. These rates are practically as low as special convention rates on certificate plan, and have the advantage of stop-over privileges, and are good returning till October 31st.

Following are Summer Tourist Rates from:

Winnipeg—\$73.00 (?) + .75 war tax.	} To Vancouver or Victoria (no extra charge to Victoria).
Toronto—\$110.65 + \$1.15 war tax return	
Halifax—\$169 (?) + \$1.75 war tax.	

If routing via Sarnia and the Great Lakes (or Port McNichol) there is an additional charge of \$10.10 to include meals and berth while on steamers.

Routing by C. P. R. to Vancouver, returning by Grand Trunk Pacific Steamers to Prince Rupert, and east by Canadian National Railways, via Edmonton, can be arranged without extra charge. Trip from Prince Rupert to Vancouver is most enjoyable passing through sheltered inland channels the entire distance. Two nights and one day are spent on these steamers. The extra charge is \$10.65 to cover meals and berth.

For further information consult your local railroad agent.

Pullman Reservations.

There will be no special car from Toronto. Reservations should be made at the earliest date, in view of the number of large conventions which are being held at the coast in June.

Hotel Accommodation.

	Rates.
Abbotsford, 921 Pender W.	\$2.00—\$3.50
Alcazar (200 rooms), corner Dunsmuir and Homer	\$1.50 up
Balmoral, 155 Hastings East	\$1.50—\$2.50
Barron, Nelson and Granville St.	\$2.50—\$4.00
Castle (150 rooms), 478 Granville St.	\$2.00—\$4.50
Dunsmuir, 500 Dunsmuir St.	\$2.00—\$3.50
Lotus, Pender and Abbott	\$1.50—\$3.50
St. Regis, Dunsmuir and Seymour	\$1.50—\$2.50
Vancouver (C.P.R.) (480 rooms), Georgia and Granville Street	\$4.00—\$7.00

The Committee on Accommodation urge that reservations be made at the earliest possible time with the hotels direct, or failing that, to communicate with Dr. Colin McDiarmid, Secretary of the Committee, Birk's Buildings, Vancouver.

Entertainment.

You will be delighted at the reception which you will receive in Vancouver. Special entertainment for the ladies is being arranged.

Side Trips.

The Triangular Trip, Vancouver, Victoria and Seattle.
Howe Sound (one day) to Chilliwack by electric car, to Nanaimo by steamer.

Shorter trips to Capilano Canyon, Stanley Park (9 mile drive; Point Grey Marine Drive. North Shore Marine Drive. Steveston (Salmon Canning), New Westminster.

PRELIMINARY PROGRAMME.

Monday, June 21, 9 a.m.—Registration

FIRST SESSION.
10.30 a.m.—12.30 p.m.

Canadian Association for Prevention of Tuberculosis (First Session).

Section Meetings.

Canadian Public Health Association, Child Welfare, Social Hygiene, Mental Hygiene.

SECOND SESSION.

Monday, June 21, 2 p.m.

Presidential Address—H. E. Young, M.D., C.M., LL.D., *Victoria*.

Symposium: "Canadian Public Health, Its Organization and Progress"—
Led by Dr. John A. Amyot, C.M.G., Deputy Minister of Health,
Ottawa, Ont.

Followed by Dr. W. H. Hattie, *Halifax, N.S.*

Hon. Dr. W. F. Roberts, *St. John, N.B.*

Dr. J. W. S. McCullough, *Toronto, Ont.*

Dr. Stuart Fraser, *Winnipeg, Man.*

Dr. M. M. Seymour, *Regina, Sask.*

Dr. W. C. Laidlaw, *Edmonton, Alta.*

Dr. H. E. Young, *Victoria, B.C.*

Representative, Canadian Association for Prevention of Tuberculosis,
and Representative of the Canadian Red Cross Society.

THIRD SESSION.

Monday, June 21, 8.30 p.m.

Presidential Address, Canadian Association of Prevention of Tuberculosis—Hon. Dr. F. L. Schaffner, *Winnipeg, Man.*

"The Association's Programme of Child Welfare for 1920"—Dr. Lionel L. Lindsay, *Montreal, P.Q.*

Canada's Need for Child Welfare Work—Miss E. M. Forsythe, *Toronto, Ont.*

FOURTH SESSION.

Tuesday, June 22nd, 9.30 a.m.

Canadian National Committee for Mental Hygiene.

Executive Committee—9.30-10.30 a.m.

Annual Meeting—10.30 to 12.

Canadian Association for Prevention of Tuberculosis (Third Session).

Section Meetings—Canadian Public Health Association, 9.30-11.30 a.m.

Child Welfare, Social Hygiene, Laboratory Workers.

11.30-12.00 noon—Address—Hon. J. D. McLean, Minister of Education,
Victoria, B.C.

12.30-1.30 p.m.—Complimentary luncheon by Rotary Club of Vancouver.

FIFTH SESSION.

Tuesday, June 22nd, 2.00 p.m.

Encephalitis Lethargica—Dr. Gordon Bell, *Winnipeg, Man.*

Symposium on Venereal Diseases.

"The Venereal Disease Problem in Rural Districts"—By Dr. M. M. Seymour, *Regina*.

"The Problem in Small Cities and Large Towns"—By Hon. Dr. Wm. F. Roberts, *St. John, N.B.*

"Venereal Disease Control in Winnipeg"—By Dr. Gordon Bell, *Winnipeg, Man.*

"The Relation of the Canadian National Council for Combating Venereal Diseases to the Programme of Venereal Disease Control"—Dr. Gordon Bates, *Toronto, Ont.*

Discussion to be led by Dr. J. A. Amyot, C.M.G., *Ottawa*, and Dr. J. W. S. McCullough, *Toronto*.

SIXTH SESSION.

Tuesday June 22, 8.30 p.m. University Auditorium.

"The Federal Government and Public Health."—Dr. John A. Amyot, C.M.G., Deputy Minister of Health, *Ottawa, Ont.*

SEVENTH SESSION.

Wednesday, June 23rd, 9.30 a.m.

10.30 a.m.—Canadian National Committee for Combating Venereal Diseases (Annual Meeting).

9.30 a.m.—Joint Session with British Columbia Hospitals Association.

Symposium on Nursing.

Nursing Standards—Miss Helen Randall, *Vancouver, B.C.*

The University in Relation to Nursing Education—Miss E. Johns, *Vancouver, B.C.*

The Organization of a Public Health Nursing Service—Miss Jean Brown, *Regina, Sask.*

The Role of Voluntary Societies in a Public Health Nursing Service—Mr. Riddington, Librarian, University of British Columbia, *Vancouver, B.C.*

The Co-ordination of State and Private Enterprises in Public Health Nursing Service—Dr. W. H. Hattie, *Halifax, N.S.*

EIGHTH SESSION.

Wednesday, June 23, 2 p.m.

Business Meeting of the Canadian Public Health Association.

Amendments to Constitution.

Report of Treasurer and Budget, 1920-21.

Reports of Special Committees.

Wednesday, June 23rd, 8.15 p.m.

Public meeting under auspices Canadian National Committee for Mental Hygiene.

1. Chairman's Remarks—Dr. Charles F. Martin, *Montreal*.

Moving Pictures and Lantern Slides Depicting Phases of Mental Hygiene Activities—Dr. C. K. Clarke and Dr. C. M. Hincks, *Toronto*.

3. Address—Hon. Dr. J. D. McLean, Provincial Secretary, *Victoria*.

4. The National Work of the Canadian Committee for Mental Hygiene—Dr. C. K. Russel, *Montreal*.

5. Public School and Mental Hygiene—Principal W. H. Vance, *Vancouver*.

SECTION OF CHILD WELFARE.

FIRST SESSION.

Monday, June 21st, 1920, 10.30 a.m.

Report Committee on Heredity and Eugenics.

Report Committee on Vital Statistics.

Report Committee on Public School Education *re* Infant Mortality.

Report Committee on Mothers.

SECOND SESSION.

Tuesday, June 22nd, 1920, 9.30 a.m.

Report Committee on Obstetrics.
Report Committee on Pediatrics.

THIRD SESSION.

Wednesday, June 23rd, 9.30 a.m.

Report Committee on Rural Communities, Nursing and Social Work
(Joint Session with the British Columbia Hospitals Association).

SECTION OF MENTAL HYGIENE.

Monday, June 21, 10.30 a.m.

Chairman's Address—Dr. C. K. Russel, *Montreal, P.Q.*

"The Rôle of the Psychiatric Clinic in a Community"—Dr. Gordon S. Mundie, *Montreal, P.Q.*

"Delinquency and the Mental Defective"—Dr. C. K. Clarke, *Toronto, Ont.*

"How We Should Deal With the Mental Defectives"—Dr. C. M. Hincks, *Toronto, Ont.*

(Title to be decided later)—Dr. A. T. Mathers, *Winnipeg, Man.*

LABORATORY SECTION.

Tuesday, June 22nd, 9.30 a.m.

Chairman's Address—Dr. H. C. Jamieson, *Edmonton, Alta.*

Paper (Title to be announced)—Dr. J. B. Collip, *Edmonton, Alta.*
(Further details of programme not at hand.)

SECTION OF SOCIAL HYGIENE.

FIRST SESSION.

Monday, June 21st, 10.30 a.m.

Treatment of Venereal Diseases.

1. Treatment of Gonorrhoea—Dr. F. S. Patch, *Montreal, P.Q.*

2. Treatment of Syphilis—Dr. E. J. Trow, *Toronto, Ont.*

3. The Rôle of the Laboratory in Venereal Disease Control—Dr. R. H. Mullin, *Vancouver, B.C.*

4. Serum Diagnosis in Gonorrhoea—Dr. H. C. Cruikshank, *Toronto.*

SECOND SESSION.

Tuesday, June 22nd, 10 a.m.

Social Aspects of the Venereal Disease Problem.

1. The Work of the Committee of Sixteen, Montreal, and Some Discussion of the Law Enforcement Problem—Rev. H. Symonds, *Montreal, P.Q.*

2. Correction and Rehabilitation in Relation to the Venereal Disease Problem—Mrs. Arthur Murphy, *Edmonton, Alta.*

3. Educational Possibilities—Mrs. L. A. Hamilton, *Toronto, Ont.*

4. The Relation of Provincial Health Departments to Social Service, Law Enforcement and Follow-up in Connection with Venereal Disease Control—Dr. W. C. Laidlaw, *Edmonton, Alta.*

Discussion to be led by Dr. W. H. Hattie, *Halifax, N.S.*

CANADIAN ASSOCIATION FOR PREVENTION OF TUBERCULOSIS.

Monday, June 21st, 1920, 10.30 a.m.

Report of General Secretary—Dr. G. D. Porter.

Diseased Teeth as a Factor in Production of Lung Disease—Dr. J. Rod-dick Byers, *St. Agathe, Que.*

Some Canadian Mortality Tables—Dr. C. D. Parfitt, *Gravenhurst, Ont.*

Some Changed Viewpoints in Connection with Tuberculosis—Dr. D. A. Stewart, *Manitoba*

Monday Evening, June 21st, 1920, 8.30 p.m.

Presidential Address—Hon. Dr. F. L. Schaffner, *Winnipeg, Man.*

Tuesday, June 22nd, 1920, 9.30 a.m.

Paper (to be announced)—Dr. Farris, *St. John, N.B.*

Paper (to be announced)—Dr. A. F. Miller, *Kentville, N.S.*

Some X-Ray Interpretations—Dr. J. T. Case, *Battle Creek, Mich., U.S.A.*

PRELIMINARY PROGRAMME.

CANADIAN MEDICAL ASSOCIATION

VANCOUVER, JUNE 22-25.

Address in Medicine—Charles Lyman Green, M.D., *St. Paul, Minn.*

Address in Surgery—Edward Archibald, *Montreal*—"Surgical treatment of ulcerated intestinal tuberculosis as occurring chiefly in course of pulmonary tuberculosis."

SECTION OF MEDICINE.

C. F. Martin, *Montreal*—"Relation of Metabolism to Clinical Medicine."

A. H. Gordon, *Montreal*—"Treatment of Hæmorrhage in Medical Disease."

Wm. House, *Portland, Ore.*—"Occultism and Insanity."

Dr. MacAllister, *New Westminster, B.C.*—"Facial Expression in Various Types of Insanity."

J. A. Ollie, *Toronto*—"Functioning of the Heart in Cardiac Disease."

W. Goldie, *Toronto*—"Signs and Symptoms of Gastro-intestinal Diseases."

A. R. Robertson, *Vancouver*—"Cerebral Syphilis."

W. S. Lemon, *Rochester, Minn.*—"Pulmonary Abscess."

N. B. Gwyn, *Toronto*—"Encephalitis Lethargica."

N. B. Gwyn, *Toronto*—"Influenzal Empyema."

R. H. M. Hardisty, *Montreal*, and G. E. Richards, *Toronto*—"Diagnosis of Gastric Diseases."

G. S. Strathy, *Toronto*—"The Action of Arsenic on the Liver."

G. H. Manchester, *New Westminster, B.C.*—"Shell Shock."

H. A. Lafleur, *Montreal*—"Spleno-medullary Leukymia; Treatment by Benzol and X-rays."

John P. Manning, *Seattle, Wash.*—"Continuous Fever in Children from Streptococci Infection in Blood Stream, with Recovery."

M. A. Smith, *Halifax*—"Modern Treatment of Gastric Disease."

J. A. McGregor, *London*—"To be announced."

H. A. McCallum, *London*—"To be announced."

Lionel M. Lindsay, *Montreal*—"Recent Advances in Our Knowledge of Rickets."

SECTION OF SURGERY.

- J. McKenty, Winnipeg—"Acute Intestinal Obstruction."
 Hadley Williams, London—"Series of Acute Perforations of the Duodenum and Stomach."
 W. S. Galbraith, Lethbridge, Alta.—"Surgical Achievements of Small Western Hospitals."
 A. Gibson, Winnipeg—"The Need of Exact Anatomical knowledge in Nerve Surgery."
 A. T. Bazin and A. Ross, Montreal—"Acute and Chronic Intestinal Obstruction."
 E. W. Allen, Edmonton—"Carcinoma of Colon."
 D. W. Graham, Swift Current, Sask.—"Œsophageal Strictures."
 J. E. Lehman, Winnipeg—"Pulmonary Abscess."
 Roland Hill, Grand Rapids, Mich.—"The Traumatic Abdomen."
 M. Sharpe, Brandon, Man.—"Locan Anæsthesia."
 N. J. Maclean, Winnipeg—"Duodenal Ulcer."
 H. A. Bruce, Toronto—"To be announced."
 J. S. McEachren, Calgary—"To be announced."
 H. J. Hassard, Portage la Prairie—"To be announced."
 W. J. Stevenson, London—"To be announced."

Symposium on Thyroid.

- F. N. G. Starr, Toronto—"Goitre and its Treatment."
 C. C. Tatham, Edmonton—"Observations and Results of the Surgical Treatment of Goitre."
 G. A. Bingham and G. E. Richards, Toronto—"Correlation of the Results of Treatment by Surgical and X-ray Method."
 J. M. Pearson, Vancouver—"The Medical Aspect of Goitre Treatment."

Genito-Urinary.

- W. W. Jones, Toronto—"Ureteral Stone."
 J. E. A. Campbell, Vancouver—"Some Phases of Syphilis."
 Charles H. Hair, Toronto—"Genito-urinary Infections."
 G. S. Gordon, Vancouver—"On Examining and Operating by the Endocystoscope."
 G. S. Whiteside, Portland, Ore.—"To be announced."

SECTION OF OBSTETRICS AND GYNAEKOLOGY.

- Robert Ferguson, London—"A Plea for Better Obstetrics."
 W. P. Graves, Boston—"Immediate and Late Results from the Use of Radium for Non-malignant Uterine Bleeding."
 Louis Frank, Louisville, Ky.—"Radium in the Treatment of Cancer of the Uterus."
 H. P. Newman, San Diego, Cal.—"Certain Considerations and Recommendations in Special Plastic Surgery of the Cervix Uteri."
 A. C. Hendrick, Toronto—"The Bleeding Uterus, Its Pathology, Diagnosis and Treatment."
 August McLean, Detroit—"Thrombosis and Emboli in Abdomen."
 H. M. Little, Montreal—"Modern Obstetrical Technique."
 J. W. Duncan, Montreal—"Toxæmia of Pregnancy."
 John C. Hirst, Philadelphia—"Operative Treatment of Cystocele in Women of Child-bearing Age."
 George H. Noble, Atlanta—"Principles Involved in Surgical Relief of Downward and Backward Displacement of the Uterus."
 T. H. Crawford, Calgary—"The Kidneys in Pregnancy."
 J. F. Percy, Galesburg, Ill.—"Heat the most Practical and Promising Treatment in Uterine Carcinoma."
 F. L. Horsfall, Seattle, Wash.—"To be announced."

SECTION OF ORTHOPAEDICS.

- V. P. Gibney, New York—"Development and Scope of Orthopaedic Surgery."
A. R. Macausland, Boston—"Treatment of Fractures."
A. Gibson, Winnipeg—"Treatment of Habitual Dislocation of Shoulder."
H. P. H. Galloway, Winnipeg—"Treatment of Fracture of the Neck in the Femur."
James Patterson, Vancouver—"Painful Feet."
Fred H. Albee, New York—"Osteoplastic Surgery."
E. G. Abbott, Portland, Me.—"Compression Fracture of the Spine."
Winnett Orr, Kansas City—"What Can we do for the Hopeless Cripple?"

SECTION OF EYE, EAR, NOSE AND THROAT.

- G. B. Fletcher, Winnipeg—"Modern Uses of the Bronchoscope."
Scott Monchief, Victoria—"Ætiology of Idiopathic Iritis and its Rarity in India."
J. Rosenbaum, Montreal—"Interstitial Keratitis."
Sterling Ryerson, Toronto—"The Uses of Radium in Ophthalmology."
The following will contribute papers on X-ray work: W. A. Wilkins, Montreal—"The Diagnostic Value of X-ray in Pulmonary Tuberculosis." Dr. J. C. McMillan, Winnipeg—Title to be announced; and others.

"1,000 members before the Congress in Vancouver in June". Recommend one new member and you will be doing your full share.

Preliminary Programme, Ontario Health Officers' Association

MAY 25TH AND 26TH, 1920.

Medical Building, University of Toronto.

President's Address, E. B. Oliver, Fort William.

"The Flu in Rural Districts," A. Nichol, Sebringville.

"Public Health Advancement During the Year," J. W. S. McCullough, Toronto.

"Venereal Diseases," R. R. McClenahan, Toronto.

"Modern Treatment of Syphilis," E. J. Trow, Toronto.

"Modern Treatment of Gonorrhoea," Kendal Bates, Toronto.

"Obstetrics and the States," K. C. McIlwraith, Toronto.

"Toronto as a Pediatric Center," Alan Brown, Toronto.

"A Maternal and Child Welfare Division for Ontario," Mary Power, Toronto.

"Some Observations on Quarantine," Fred Adams, M.O.H., Windsor.

"Ventilation," A. H. Wright, Toronto.

"Diphtheria in a Calf," J. H. Radford, Galt.

At the request of the Canadian National Council for Combating Venereal Diseases Allen's Theatres, Ltd., have arranged to show the film, "The End of the Road," in Massey Hall at 10 a.m. on the 26th.

Prince Edward Island is leading in the National Membership Campaign—90% of its quota of new members already enrolled.

